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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/474,114	12/29/1999	KARL W HAIDER	MO-5457/MD-9	1888

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EXAMINER

SERGEANT, RABON A

ART UNIT

PAPER NUMBER

1711

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16

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.
09/474,114

Applicant(s)
Haider et al.

Examiner
Rabon Sergeant

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1711



-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE three MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136 (a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on Feb 21, 2002
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11; 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-11 is/are pending in the application.
- 4a) Of the above, claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-11 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claims _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- 11) ☐ The proposed drawing correction filed on _____ is: a) ☐ approved b) ☐ disapproved by the Examiner.
If approved, corrected drawings are required in reply to this Office action.
- 12) ☐ The oath or declaration is objected to by the Examiner.

Priority under 35 U.S.C. §§ 119 and 120

- 13) ☐ Acknowledgement is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
a) ☐ All b) ☐ Some* c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
*See the attached detailed Office action for a list of the certified copies not received.
- 14) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. § 119(e).
a) ☐ The translation of the foreign language provisional application has been received.
- 15) ☐ Acknowledgement is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121.

Attachment(s)

- 1) ☐ Notice of References Cited (PTO-892) 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948) 5) ☐ Notice of Informal Patent Application (PTO-152)
- 3) ☐ Information Disclosure Statement(s) (PTO-1449) Paper No(s). _____ 6) ☐ Other: _____

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1. The terminal disclaimer filed on February 21, 2002 disclaiming the terminal portion of any patent granted on this application which would extend beyond the expiration date of U. S. Patent 6,211,324 and U. S. Patent 6,166,166 has been reviewed and is accepted. The terminal disclaimer has been recorded.

2. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless -

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

(e) the invention was described in a patent granted on an application for patent by another filed in the United States before the invention thereof by the applicant for patent, or on an international application by another who has fulfilled the requirements of paragraphs (1), (2), and (4) of section 371(c) of this title before the invention thereof by the applicant for patent.

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor

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and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

3. Claims 1-11 are rejected under 35 U.S.C. 102(b) as anticipated by or, in the alternative, under 35 U.S.C. 103(a) as obvious over Yokelson et al. ('543).

Patentees disclose the production of hydrophobic polyurethanes derived from the reaction of difunctional polybutadienes, having molecular weights which overlap applicants' diols, with diisocyanates, such as isophorone diisocyanate and dicyclohexylmethane diisocyanate, and diol chain extenders. Patentees further disclose that prepolymer techniques may be employed to produce the polymer. Therefore, applicants' prepolymer isocyanate content is considered to be inherently met by the reference. See abstract; column 2, lines 45+; column 3; and column 5, lines 1-16.

4. In addition to the (cyclo)aliphatic diisocyanates, patentees disclose the use of aromatic diisocyanates to produce the polyurethanes. If the reference is determined to not be anticipatory, in view of this additional disclosure, the position is taken that one of ordinary skill in the art seeking light stable polyurethanes would have been motivated to utilize the disclosed (cyclo)aliphatic diisocyanates, since it has long been known that polyurethanes derived from nonaromatic diisocyanates possess superior light stability properties, as compared to polymers derived from aromatic isocyanates.

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5. Applicants' arguments have been considered; however, they are insufficient to withdraw the rejection. Firstly, arguments pertaining to the use of MDI within a prepolymer process and the resulting unsuitable product provide no factual evidence that (cyclo)aliphatic diisocyanates will not work in a prepolymeric system, in accordance with the teachings of the reference. Secondly, applicants' arguments with respect to the expense of aliphatic isocyanates are irrelevant with respect to the anticipation rejection and fail to adequately rebut the *prima facie* case of obviousness, wherein a reasonable motivation has been provided for selecting the (cyclo)aliphatic diisocyanates. Thirdly, applicants' argument with respect to the "certain olefin" is not understood; applicants have not explained how the respective polyolefins differ, and applicants' claims are not commensurate in scope with this argument. For example, the polybutadiene of claim 1 is certainly met by the disclosure of the reference, and the same polybutadiene appears to be represented by the structure of claim 3 and the structure within the reference. Lastly, applicants' argument that, based on patentees' disclosure, one skilled in the art would have expected to have nothing but problems from preparing an elastomer by reacting a chain extender with a prepolymer derived from a (cyclo)aliphatic is not understood. The examiner has found no such negative teachings.

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6. Claims 1-11 are rejected under 35 U.S.C. 102(e) as being anticipated by Taylor et al. ('166).

The applied reference has a common inventor with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

7. Applicants' arguments are not commensurate in scope with applicants' claims. The instant claims do not exclude the argued characteristics of the reference. Furthermore, arguments pertaining to the use of MDI are not considered to be relevant to the instant claims. Lastly, applicants' 37 CFR 1.131 declaration is ineffective to overcome the reference, because the respective sets of claims are drawn to patentably indistinct subject matter.

8. Claims 1-8, 10, and 11 are rejected under 35 U.S.C. 102(e) as being anticipated by Haider et al. ('324).

The applied reference has a common assignee with the instant application. Based upon the earlier effective U.S. filing date of the reference, it constitutes prior art under 35 U.S.C. 102(e). This rejection under 35 U.S.C. 102(e) might be overcome either by a showing under 37 CFR 1.132 that any invention disclosed but not claimed in the reference was derived from the inventor

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of this application and is thus not the invention "by another," or by an appropriate showing under 37 CFR 1.131.

9. Applicants' arguments have been considered; however, they are not commensurate in scope with the instant claims. The rejected claims do not exclude asymmetric diols. Furthermore, applicants' 37 CFR 1.131 declaration is ineffective to overcome the reference, because the respective sets of claims are drawn to patentably indistinct subject matter.

10. The position is maintained that each of the aforementioned references within paragraphs 6 and 8 disclose the production of polyurethanes from (cyclo)aliphatic diisocyanates, diol chain extenders, and polyols which meet the instantly claimed polyol.

11. Claims 1, 2, 4-8, 10, and 11 are rejected under 35 U.S.C. 102(b) as being anticipated by Frisch et al. ('961).

Patentees disclose a polyurethane elastomeric composition derived from the reaction of a (cyclo)aliphatic diisocyanate with a polybutadiene diol and a diol chain extender. See abstract and column 2.

12. Despite applicants' arguments, applicants have not established that the polybutadiene diol of Frisch et al. possesses the argued elevated functionality. The citation within the '543 patent merely indicates that the polyol **can** have a functionality greater than two. Furthermore, the conventional polybutadiene resin disclosed within the '598 patent at column 6, line 59 is indicated as having a functionality of **about** 2.2, which is considered to meet applicants' claimed range.

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This resin is considered to be embodied by Frisch et al. Lastly, applicants' arguments with respect to the polyol are not commensurate in scope with the rejected claims.

13. Claims 1, 2, 4, 6, and 8-11 are rejected under 35 U.S.C. 102(b) as being anticipated by Huang et al. (Tensile Property of Modified Hydroxyl-Terminated Polybutadiene-Based Polyurethanes).

The reference discloses a polyurethane elastomeric composition derived from the reaction of a 4,4'-dicyclohexylmethane diisocyanate with a polybutadiene diol and 1,4-butanediol. See page 1236.

14. Applicants' argument that the functionality of the disclosed polybutadiene exceeds that of the claims has been considered; however, the argued polybutadiene resin, as disclosed within the '598 patent, is indicated as having a functionality of **about** 2.2, which is considered to meet applicants' claimed range.


15. **THIS ACTION IS MADE FINAL.** Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR

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1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the mailing date of this final action.

Any inquiry concerning this communication should be directed to R. Sergent at telephone number (703) 308-2982.


RABON SERGENT
PRIMARY EXAMINER

R. Sergent

June 2, 2002